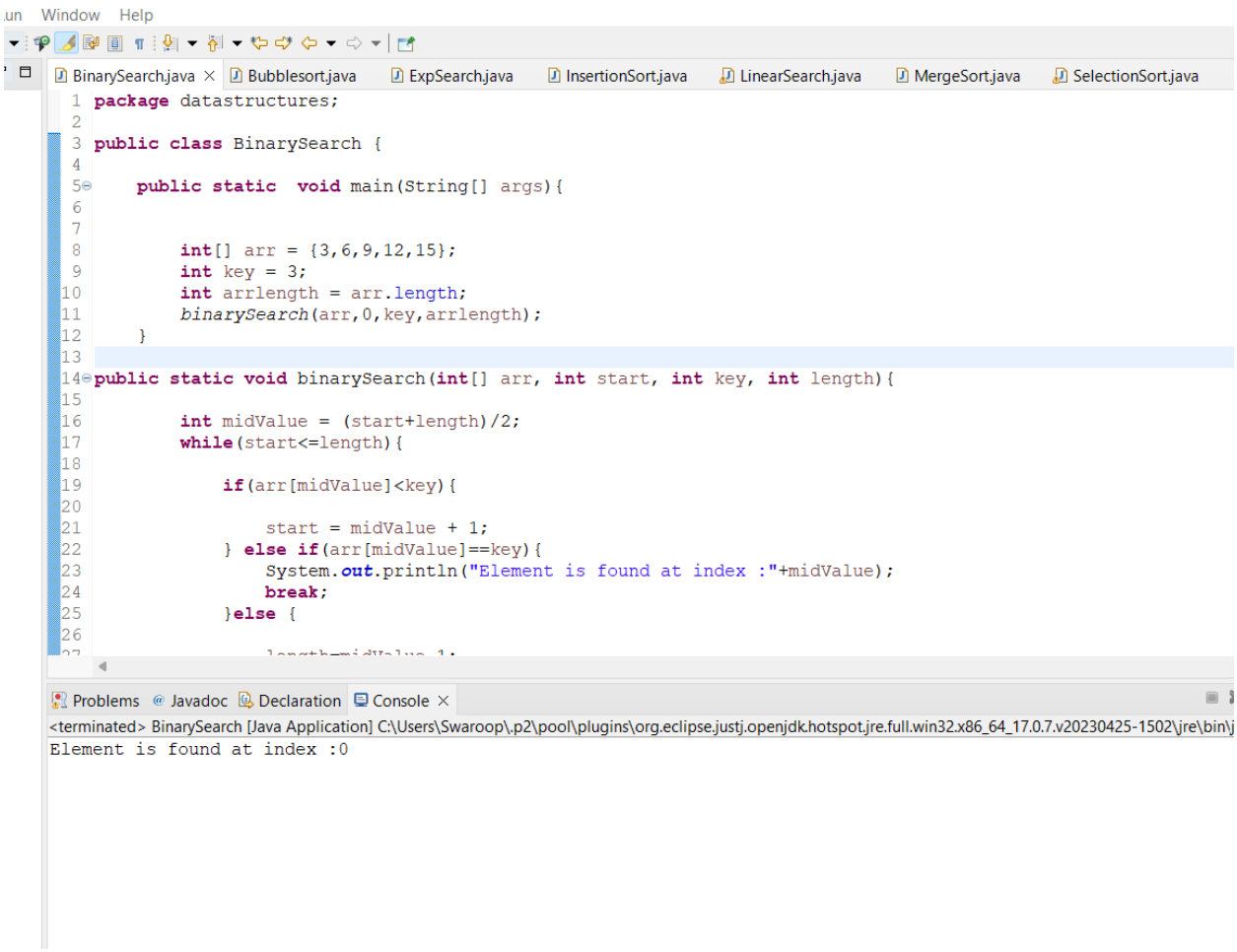
## Problem Statement-5

```
package datastructures;
public class BinarySearch {
   public static  void main(String[] args){
        int[] arr = {3,6,9,12,15};
        int key = 3;
        int arrlength = arr.length;
        binarySearch(arr,0,key,arrlength);
   }
public static void binarySearch(int[] arr, int start, int key, int length){
        int midValue = (start+length)/2;
        while(start<=length){
            if(arr[midValue]<key){
                start = midValue + 1;
            } else if(arr[midValue]==key){
                System.out.println("Element is found at index :"+midValue);
                break;
            }else {
                length=midValue-1;
            }
            midValue = (start+length)/2;
        }
            if(start>length){
                System.out.println("Element is not found");
            }
}
}
```


un Window Help
BinarySearch.java
Bubblesort.java
ExpSearch.java
InsertionSort.java
LinearSearch.java
MergeSort.java
SelectionSort.java
1 package datastructures;
2
3 public class BinarySearch {
4
5 public static void main(String[] args){
6
7
8 int[] arr = {3,6,9,12,15};
9 int key = 3;
10 int arrlength = arr.length;
11 binarySearch(arr,0,key,arrlength);
12 }
13
14 public static void binarySearch(int[] arr, int start, int key, int length){
15
16 int midValue = (start+length)/2;
17 while(start<=length){
18
19 if(arr[midValue]<key){
20
21 start = midValue + 1;
22 } else if(arr[midValue]==key){
23 System.out.println("Element is found at index :"+midValue);
24 break;
25 }else {
26
Problems
Javadoc
Declaration
Console
<terminated> BinarySearch [Java Application] C:\Users\Swaroop\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.7.v20230425-1502\jre\bin\j
Element is found at index :0